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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,044	03/07/2007	Francois Dolivo	CH920030059US1	5955
48915 7590 06/06/2011 CANTOR COLBURN LLP-IBM YORKTOWN 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER ZELASKIEWICZ, CHRYSTINA E				
ART UNIT 3621		PAPER NUMBER		
NOTIFICATION DATE 06/06/2011		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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usptopatentmail@cantorcolburn.com

### Office Action Summary

**Application No.**

10/575,044

**Applicant(s)**

DOLIVO ET AL.

**Examiner**

CHRYSTINA ZELASKIEWICZ

**Art Unit**

3621

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4-7, 9-16, 18-25 and 29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 9-16, 18-25 and 29 is/are rejected.
- 7) ☒ Claim(s) 16, 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Acknowledgements**

1. This action is in reply to the Amendment filed on March 21, 2011.
2. Claims 1, 4-7, 9-16, 18-25, and 29 are pending.
3. Claims 2-3, 8, 17, 26-28, and 30-70 have been cancelled.
4. Claims 1, 4-7, 9-16, 18-25, and 29 have been examined.
5. This Office Action is given Paper No. 20110529 for references purposes only.

### **Specification**

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP §608.01. Specifically, see specification p 2.

### **Claim Objections**

7. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
  - a. Specifically, claim 16 recites "the container control certificate comprises identification data for the container" whereas claim 1 recites "the electronic container control certificate comprises... identification data for the container."

8. Claim 29 is objected to because it states "Computing unit according to claim 18, comprising... interface." Claim 29 is dependent upon claim 18, which is a method claim. Appropriate correction is required.

**Claim Rejections - 35 USC § 112, 2<sup>nd</sup> paragraph**

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1, 4-7, 9-16, 18-25, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
11. Claim 1 recites "storing the container control certificate in the log of the electronic seal; and verifying the signed container control certificate by a corresponding function implemented in the electronic seal, wherein the container control certificate is stored in the log if the verification succeeds and if the verification fails, the container control certificate is not stored in the log." This phrase is vague and indefinite because the claim recites storing the container control certificate, then gives the conditional limitations of when to store and not to store said certificate. In other words, the claim could be read as "storing the container control certificate in the log of the electronic seal... if the verification fails, the container control certificate is not stored in the log." For purposes of applying the prior art, Examiner will interpret the phrase as "storing the container control certificate in the log of the electronic seal; and verifying the signed

container control certificate by a corresponding function implemented in the electronic seal, wherein the container control certificate remains stored in the log if the verification succeeds and if the verification fails, the container control certificate is no longer stored in the log."

12. Claim 1 recites the limitation "associated with a first entity." Based upon a review of the claims and specification, Examiner finds that "a first entity" is intended to mean "the first entity." Therefore, for purposes of applying the prior art, Examiner will assume that Applicant intended "associated with the first entity" to be consistent with the preamble and other claims.

13. Claim 9 states "the cryptographic key associated to the second entity is used by the electronic seal for decrypting data expected to be received from the second entity." This phrase is vague and indefinite because "data expected to be received" can refer to data that is received or is not received. For purposes of applying the prior art, Examiner will assume the former.

14. Claim 19 recites the limitation "the signed location data." There is insufficient antecedent basis for this limitation in this claim. Specifically, does this limitation refer to "a signed location data" or to "the signed container control certificate." In order to compare the claim with the prior art (i.e. for prior art purposes only) and thus to provide compact prosecution, Examiner will interpret the phrase as "a signed location data."

15. Claim 19 recites the limitation "a log of the electronic seal." Based upon a review of the claims and specification, Examiner finds that "a log of the electronic seal" is intended to mean "the log of the electronic seal." Therefore, for purposes of applying the

prior art, Examiner will assume that Applicant intended "the log of the electronic seal" to be consistent with the preamble and other claims.

16. Claim 20 recites the limitation "the signed location data." There is insufficient antecedent basis for this limitation in this claim. Specifically, does this limitation refer to "a signed location data" or to "the signed container control certificate." In order to compare the claim with the prior art (i.e. for prior art purposes only) and thus to provide compact prosecution, Examiner will interpret the phrase as "a signed location data."

17. Claim 20 recites the limitation "a corresponding function implemented in the electronic seal." Based upon a review of the claims and specification, Examiner finds that "a corresponding function implemented in the electronic seal" is intended to mean "the corresponding function implemented in the electronic seal." Therefore, for purposes of applying the prior art, Examiner will assume that Applicant intended "the corresponding function implemented in the electronic seal" to be consistent with the preamble and other claims.

18. Claim 23 recites "recording the location data in the log of the electronic seal is subject to a result of the signature verification process." This phrase is vague and indefinite because the "signature verification process" could refer to either the container control certificate (which was digitally signed by the first entity) verification of claim 1, or the signed location data verification of claim 20. For purposes of applying the prior art only, Examiner will assume the latter.

19. Claim 25 recites the limitation "a second entity." Based upon a review of the claims and specification, Examiner finds that "a second entity" is intended to mean "the

second entity." Therefore, for purposes of applying the prior art, Examiner will assume that Applicant intended "the second entity" to be consistent with the preamble and other claims.

20. Claim 29 recites the limitation "the certificate authority." There is insufficient antecedent basis for this limitation in this claim. Specifically, does this limitation refer to "a certificate authority" or to "the associated entity." In order to compare the claim with the prior art (i.e. for prior art purposes only) and thus to provide compact prosecution, Examiner will interpret the phrase as "a certificate authority."

21. Claim 29 recites the limitation "the certificate authority interface." There is insufficient antecedent basis for this limitation in this claim. Specifically, does this limitation refer to "a certificate authority interface" or to "the interface of the electronic seal." In order to compare the claim with the prior art (i.e. for prior art purposes only) and thus to provide compact prosecution, Examiner will interpret the phrase as "a certificate authority interface."

22. Examiner finds that because the claims are indefinite under 35 U.S.C. §112, 2<sup>nd</sup> paragraph, it is impossible to properly construe claim scope at this time. However, in accordance with MPEP §2173.06 and the USPTO's policy of trying to advance prosecution by providing art rejections even though these claims are indefinite, the claims are construed and the prior art is applied as much as practically possible.

**Claim Rejections - 35 USC § 103**

23. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

24. Claims 1, 4-7, 9-16, 18-25, and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Girault et al. (US 5,768,379), in view of Arnold (US 6,456,716), and further in view of Boman et al. (US 7,564,350).

**Claim 1**

25. Girault discloses the following limitations:

- b. which container control certificate is digitally signed (signature) by the first entity (user) (C2 L8 – C3 L20);
- c. storing (stored, see C2 L8-18) the container control certificate (signature, see C2 L8-18) in the log (portable storage device, see C2 L8-18) of the electronic seal;
- d. verifying (verification, see C2 L65 – C3 L2) the signed container control certificate (signature, see C2 L65 – C3 L2) by a corresponding function (production algorithm, see abstract, C2 L8 – C3 L67) implemented in the



electronic seal, and wherein the container control certificate (signature and data) is stored in the log (portable storage device) if the verification succeeds (signature computed is equal to signature read, see abstract, C2 L8 – C4 L40) and if the verification fails, the container control certificate is not stored in the log.

26. Girault does not disclose the following limitations:

- e. an electronic container control certificate... first entity;
- f. the electronic container control certificate... second entity;
- g. receiving through an interface... container;
- h. the electronic seal... interface;
- i. the electronic container control certificate comprises identification data for the container;
- j. receiving in the electronic seal... first and second entities.

27. Arnold teaches the following limitations:

- k. an electronic container control certificate (certificate, C3 L8-35) associated with a first entity (element A, C3 L8-35);
- l. the electronic container control certificate (certificate, C3 L8-35) comprises a cryptographic key (public key of authority to decrypt) associated to the second entity (element B, C3 L8-35).

28. Boman teaches the following limitations:

- m. receiving through an interface of an electronic seal (device 12, see abstract, C6 L9-36, C7 L34-67) associated with the container (container, see abstract, C6 L9-36);

- n. the electronic seal (device 12, see abstract, C6 L9-36, C7 L34-67) including a log (log file, see C8 L8-39) that records data (e.g. door events, temperature readings, see C8 L22-39) and a control unit (e.g. door sensor, see C12 L1-19) that verifies data received through the interface (whether security breach has occurred, see C12 L1-19);
  - o. the electronic container control certificate comprises identification data (code that uniquely identifies the container, see C8 L7-21) for the container;
  - p. receiving in the electronic seal (device 12, see abstract, C6 L9-36) associated with the container (container, see abstract, C6 L9-36), geographic location data (GPS data, see C6 L9-36) from a location recording device (reader 16, see abstract, C6 L9-36) associated with one of the first and second entities.
29. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the certificate of Arnold, and the electronic seal with location data of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). Use of an electronic container control certificate will help to promote authentication (Arnold C2 L52-67). An electronic seal that provides location data can be used to secure, track, and determine the integrity of a container (Boman C6 L9-36).

30. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the certificate of Arnold, and the electronic seal with location data of Boman since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable. Use of an electronic container control certificate will help to promote authentication (Arnold C2 L52-67). An electronic seal that provides location data can be used to secure, track, and determine the integrity of a container (Boman C6 L9-36).

#### Claim 4

31. Girault, in view of Arnold and Boman, discloses the limitations above. Furthermore, Girault discloses the following limitations:

- q. verifying the digital signature of the container control certificate by applying decrypt information (data element) stored in the log of the electronic seal and delivered to the log by a previous entity of the transportation chain (abstract, C2 L8 – C3 L67).

#### Claim 5

32. Girault, in view of Arnold and Boman, discloses the limitations above. Furthermore, Girault discloses the following limitations:

- r. the verification is considered to be failed (signature computed is not equal to signature read) if the signed container control certificate cannot be decrypted with the decrypt information stored in the log (verification algorithm) (abstract, C2 L8 – C4 L40).

Claim 6

33. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

- s. a status of a container lock is subject to the result of the signature verification process (verification of the signature) (abstract, C2 L8 – C3 L20).

Claim 7

34. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

- t. The electronic seal issues... fails.

35. Furthermore, Arnold teaches the following limitations:

- u. the electronic seal issues a warning (error condition) if the verification of the signature fails (C13 L55-65).

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the warning of signature failure of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a

secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and  
3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). A seal to issue a warning if verification fails will help ensure only authorized access (Arnold C13 L55-65).

Claim 9

37. Girault, in view of Arnold and Boman, discloses the limitations above.  
Furthermore, Girault discloses the following limitations:

- v. the cryptographic key (verification key) associated to the second entity is used by the electronic seal for decrypting data expected to be received from the second entity (abstract, C2 L8 – C4 L40).

Claim 10

38. Girault, in view of Arnold and Boman, discloses the limitations above.  
Furthermore, Girault discloses the following limitations:

- w. the electronic seal is designed for controlling a lock of the container (building lock) (abstract, C6 L12-18).

Claim 11

39. Girault, in view of Arnold and Boman, discloses the limitations above.  
Furthermore, Girault discloses the following limitations:

- x. an asymmetric cryptographic key system (public key, RSA algorithm) is used for digitally signing the container control certificate (C4 L58 – C5 L22).

Claim 12

40. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

- y. a public - private key system (public key, RSA algorithm) is used for digitally signing the container control certificate (C4 L58 – C5 L22).

Claim 13

41. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

- z. The container control certificate... private key,
42. Furthermore, Arnold teaches the following limitations:
- aa. the container control certificate is signed using a private key (secret key, see C2 L52 - C3 L35) associated to the first entity.
43. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the private key signature of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security

and logistics efficiency (Boman C3 L15-25). A certificate signed using a private key will help ensure secured access (Arnold C2 L52 - C3 L35).

Claim 14

44. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

bb. The container control certificate... first entity.

45. Furthermore, Arnold teaches the following limitations:

cc. the container control certificate is signed using a private key (private key) associated to the first entity and the decrypt information stored in the log comprises a public key (public key) of the first entity (C2 L52 - C3 L35).

46. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the private key and public key of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). A certificate signed using a private key will help ensure secured access (Arnold C2 L52 - C3 L35).

Claim 15

47. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

dd. The first entity... authority.

48. Furthermore, Arnold teaches the following limitations:

ee. the first entity receives the cryptographic key associated to the second entity from a certificate authority (authority T) (C2 L52 - C3 L35).

49. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the cryptographic key of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). Receiving a key from a certificate authority will help ensure secured access (Arnold C2 L52 - C3 L35).

#### Claim 16

50. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

ff. The container control certificate... container.

51. Furthermore, Boman teaches the following limitations:

gg. the container control certificate comprises identification data for the container (code that uniquely identifies the container, see C8 L7-21).



52. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, in view of Arnold, with the container identification data of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). Uniquely identifying the container will assist in tracking its history (Boman C8 L7-21).

Claim 18

53. Girault, in view of Arnold and Boman, discloses the limitations above. Furthermore, Girault discloses the following limitations:

- hh. the location data is digitally signed (signature) by the associated entity (C2 L8 – C4 L40, C6 L5-11).

Claim 19

54. Girault, in view of Arnold and Boman, discloses the limitations above. Furthermore, Girault discloses the following limitations:

- ii. the signed location data is stored in a log of the electronic seal (electronic lock) (C2 L8 – C4 L40, C6 L5-11).

Claim 20

55. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

- jj. verifying the signed location data by a corresponding function (production algorithm) implemented in the electronic seal (C2 L8 – C4 L40, C6 L5-11).

#### Claim 21

56. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

- kk. verifying the digital signature of the location data by applying decrypt information (data element) stored in the log of the electronic seal and delivered to the log by a previous entity of the transportation chain (C2 L8 – C4 L40, C6 L5-11).

#### Claim 22

57. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

- ll. the verification is considered to be failed (signature computed is not equal to signature read), if the signed location data cannot be decrypted with decrypt information stored in the log (verification algorithm) (abstract, C2 L8 – C4 L40).

#### Claim 23

58. Girault, in view of Arnold and Boman, discloses the limitations above.

Furthermore, Girault discloses the following limitations:

mm. recording the location data in the log (portable storage device) of the electronic seal is subject to a result of the signature verification process (signature computed is equal to signature read) (abstract, C2 L8 – C4 L40).

#### Claim 24

59. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

nn. The electronic seal transmits... entities.

60. Furthermore, Arnold teaches the following limitations:

oo. the electronic seal transmits container identification information (location information) to a location recording device associated to one of the entities (C24 L40-62, C26 L37-51).

61. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the identification information of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). A seal with identification information will help ensure secured access (Arnold C24 L40-62, C26 L37-51).

Claim 25

62. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

pp. The transmitted container... second entity.

63. Furthermore, Arnold teaches the following limitations:

qq. the transmitted container identification information is digitally signed (signed copy) by a second entity (C24 L40 - C25 L10).

64. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the signed identification information of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). Having the identification information digitally signed will help ensure secured access (Arnold C24 L40 - C25 L10).

Claim 29

65. Girault, in view of Arnold and Boman, discloses the limitations above. Girault does not disclose the following limitations:

rr. A log for storing... interface.

66. Furthermore, Arnold teaches the following limitations:

ss. a log for storing a cryptographic key associated to the certificate authority for decrypting information received from the certificate authority via the certificate authority interface (C14 L15-21).

67. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the log of Arnold, and the electronic seal of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). A log for storing a key will help ensure secured access (Arnold C14 L15-21).

### **Response to Arguments**

68. Applicant argues that Girault, in view of Arnold, and further in view of Boman does not disclose transferring a container control certificate including a cryptographic key to an electronic seal for a container (Amendment p 6-7). Furthermore, Applicant argues that no rational basis exists for combining Boman with Girault in view of Arnold (Amendment p 7).

tt. Examiner disagrees. Arnold teaches an electronic container control certificate (certificate, C3 L8-35) associated with a first entity (element A, C3 L8-35), wherein the electronic container control certificate (certificate, C3 L8-35)

comprises a cryptographic key (public key of authority to decrypt) associated to the second entity (element B, C3 L8-35).

uu. Additionally, Boman teaches an electronic seal (device 12, see abstract, C6 L9-36, C7 L34-67) including a log (log file, see C8 L8-39) that records data (e.g. door events, temperature readings, see C8 L22-39) and a control unit (e.g. door sensor, see C12 L1-19) that verifies data received through the interface (whether security breach has occurred, see C12 L1-19).

vv. Furthermore, Boman teaches the electronic container control certificate comprises identification data (code that uniquely identifies the container, see C8 L7-21) for the container, and receiving in the electronic seal geographic location data (GPS data, see C6 L9-36) from a location recording device (reader 16, see abstract, C6 L9-36) associated with one of the first and second entities.

ww. Finally, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the portable storage device of Girault, with the certificate of Arnold, and the electronic seal with location data of Boman because 1) a need exists for a system that can provide secured access (Girault C1 L14-65); 2) a need exists for a secure, but relatively inexpensive cryptographic system (Arnold C1 L15 – C3 L61); and 3) a need exists for tracking transport movements of containers for reasons of security and logistics efficiency (Boman C3 L15-25). Use of an electronic container control certificate will help to promote authentication (Arnold C2 L52-67). An electronic seal that provides location data

can be used to secure, track, and determine the integrity of a container (Boman C6 L9-36).

### **Claim Interpretation**

69. Unless expressly noted otherwise by Examiner, Examiner maintains her position on claim interpretation as noted in the Dec 2010 Non Final Office Action, Paragraph Nos. 57-60 (Paper No. 20100128).

70. After another careful review of the original specification and unless expressly noted otherwise by Examiner, Examiner maintains her position that Applicant is not his own lexicographer. See MPEP § 2111.01 IV.

71. After review of the March 21, 2011 Claim Amendments, Examiner finds that because the examined claims recite neither "step for" nor "means for," the examined claims fail Prong (A) as set forth in MPEP §2181 I. Because all examined claims fail Prong (A), Examiner concludes that all examined claims do not invoke 35 U.S.C. §112, 6<sup>th</sup> paragraph. See also Ex parte Miyazaki, 89 USPQ2d 1207, 1215-16 (B.P.A.I. 2008) (precedential).

72. Examiner hereby adopts the following definitions under the broadest reasonable interpretation standard. In accordance with *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997), Examiner points to these other sources to support his interpretation of the claims.<sup>1</sup> Additionally, these definitions are only a guide

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<sup>1</sup> While most definitions are cited because these terms are found in the claims, Examiner may have provided additional definition(s) to help interpret words, phrases, or concepts found in the definitions themselves or in the prior art.

to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:

xx. **interface** "2 Software that enables a program to work with the user (the user interface, which can be a command-line interface, menu-driven, or a graphical user interface), with another program such as the operating system, or with the computer's hardware." Computer Dictionary, 3<sup>rd</sup> Edition, Microsoft Press, Redmond, WA, 1997;

yy. **log** "1 A record of transactions or activities that take place on a computer system." Computer Dictionary, 3<sup>rd</sup> Edition, Microsoft Press, Redmond, WA, 1997;

zz. **store** "4. *Computer Science* To copy (data) into memory or onto a storage device, such as a hard disk." The American Heritage® Dictionary of the English Language, 4th ed. Boston: Houghton Mifflin, 2000;

aaa. **unit** "(3) A software component that is not subdivided into other components." IEEE Standard Computer Dictionary, The Institute of Electrical and Electronics Engineers, New York, NY, 1990.

73. For compact prosecution purposes and should Applicant overcome the prior art rejections noted above, Applicant is reminded that optional or conditional elements do not narrow the claims because they can always be omitted. See *e.g.* MPEP §2106 II C.: "Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. [Emphasis in original.]; and *In re Johnston*, 435 F.3d 1381, 77 USPQ2d



1788, 1790 (Fed. Cir. 2006) ("As a matter of linguistic precision, optional elements do not narrow the claim because they can always be omitted.").

bbb. For example, claim 5 recites "verification is considered to be failed *if* the signed container control certificate cannot be decrypted... log." Claim 22 cites substantially the same limitation.

ccc. Claim 7 recites "issues a warning *if* the verification of the signature fails."

### **Conclusion**

74. Applicant's amendment filed on March 21, 2011 necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

75. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

76. Because this application is now final, Applicant is reminded of the USPTO's after final practice as discussed in MPEP §714.12 and §714.13 and that entry of

amendments after final is *not* a matter of right. "The refusal of an examiner to enter an amendment after final rejection of claims is a matter of discretion." *In re Berger*, 279 F.3d 975, 984, 61 USPQ2d 1523, 1529 (Fed. Cir. 2002) (citations omitted). Furthermore, suggestions or examples of claim language provided by Examiner are just that—suggestions or examples—and do not constitute a formal requirement mandated by Examiner. Unless stated otherwise by an express indication that a claim is "allowed," exemplary claim language provided by Examiner to overcome a particular rejection or to change claim interpretation has *not been addressed* with respect to other aspects of patentability (*e.g.* §101 patentable subject matter, §112, 1<sup>st</sup> paragraph written description and enablement, §112, 2<sup>nd</sup> paragraph indefiniteness, and §102 and §103, prior art). Therefore, any claim amendment submitted under 37 C.F.R. §1.116 that incorporates an Examiner suggestion or example or simply changes claim interpretation will nevertheless require further consideration and/or search and a patentability determination as noted above.

77. Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to Chrystina Zelaskiewicz whose telephone number is 571.270.3940. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Fischer can be reached at 571.272.6779.

78. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Chrystina Zelaskiewicz/  
Examiner, Art Unit 3621  
May 29, 2011

/ANDREW J. FISCHER/  
Supervisory Patent Examiner, Art Unit 3621